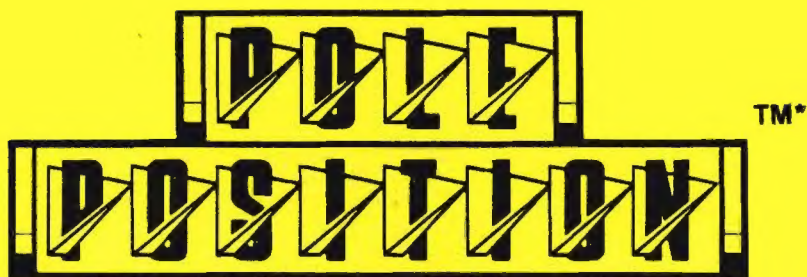
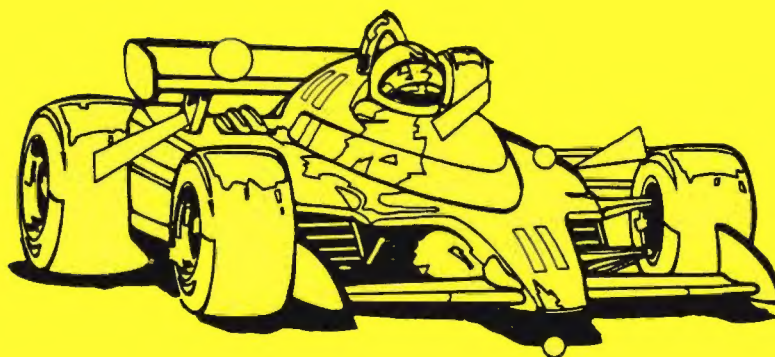


## Supplement to




Operation, Maintenance, and Service Manual (TM-218)  
and Schematic Package (SP-218)



\*Pole Position is engineered and designed by Namco Ltd. Manufactured under license by Atari, Inc.  
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 A Warner Communications Company

## Parts List Changes

### NOTE

The metal attraction panel (part no. 039155-01) shown in Figures 1-2, 3-2, and 3-3, is not included in the Sit-Down Cabinet Assembly. This part may be ordered separately. Please contact your Atari representative for further information.

The following part number was changed in the Control Panel Assembly Parts List.

### Control Panel Assembly Parts List

<i>Part No.</i>	<i>Description</i>
<b><i>Upright and Sit-Down Cabinets</i></b>	
A039229-01	Steering-Wheel Control Assembly (Namco games use part no. A039229-02)
A000608-09	Gear-Shifter Control Assembly
72-JB3814S	#8-16 x .87-Inch Screw
75-5512B	#1/4-20 x .75-Inch Black Carriage Bolt
005255-04	Shifter Bezel
039154-01	Shifter Spacer
175002-004	#10 Flat Washer
▶ 177010-244	#1/4-20 Hex Locknut

The following part numbers were changed in the Steering-Wheel Control Assembly Parts List.

## Steering-Wheel Control Assembly Parts List

Part No.	Description
A035220-02	Coupler Printed-Circuit Board Assembly <i>(includes Radial Optical Coupler)</i>
72-8008	#10-32 x 0.50-Inch Steel Socket-Head Cap Screw
72-8012	#10-32 x 0.75-Inch Steel Socket-Head Cap Screw
72-8408	#4-40 x 0.50-Inch Steel Socket-Head Cap Screw
72-HB3606S	#6-32 x 0.38-Inch Zinc-Plated Steel Hex Washer-Head Screw
▶ 75-040S	#10 Split-Lock Washer
▶ 75-044S	#4 Split-Lock Washer
75-07014	#4 Flat Washer
79-58356	4-Position Connector with Locking Ramp <i>(located on the Coupler PCB Assembly)</i>
030369-01	Radial Optical Coupler <i>(located on the Coupler PCB Assembly)</i>
035221-01	100 $\Omega$ , $\pm 5\%$ , 1/4 W Resistor <i>(located on the Coupler PCB Assembly)</i>
039230-01	Steering Cap
039231-01	Steering Shaft
039232-01	Spacer
039234-01	Steering Frame
039243-01	Steering Cap Label
035938-01	Encoding Wheel
▶ 040264-01	Encoder Shaft
107013-001	3-in-One® Oil
175002-001	Flat Washer
175002-002	#10 Heavy Flat Washer
▶ 175009-170	Nylon Flat Washer
178012-001	Retaining Ring for 0.75-Inch Shaft
▶ 178012-003	Retaining Ring for 0.25-Inch Shaft
178027-001	Nyogel 779® Lubricant
178097-001	Bearing for 0.25-Inch Shaft
178099-003	Steering Wheel
178100-001	Bearing Flange for 0.75-Inch Shaft
178101-001	24 Diametral Pitch x 20° Pressure Angle x 2.500 Pitch Diameter Spur Gear
178101-002	24 Diametral Pitch x 20° Pressure Angle x 0.583 Pitch Diameter Spur Gear
▶ 178118-001	3/8-inch x 1/4-inch Sleeve Bearing

The following part number was changed in the Printed-Circuit Board Mounting Hardware Parts List.

### Printed-Circuit Board Mounting Hardware Parts List

Part No.	Description
<b>U.S.-Built Upright and Sit-Down Cabinets</b>	
A037701-01	Electromagnetic Interference (EMI) Cage <i>(includes guides)</i>
72-1404F	#4-40 x 1/4-Inch Cross-Recessed Steel Screw
72-1604F	#6-32 x 1/4-Inch Cross-Recessed Steel Screw
► 034536-03	Foam Pad

The following part numbers were changed in the CPU PCB Assembly Parts List.

### Central Processing Unit Printed-Circuit Board Assembly Parts List

Designator	Description	Part No.
<b>Capacitors</b>		
► C10	0.1 $\mu$ F, $\pm$ 10%, 25 V Ceramic-Disc Axial-Lead Capacitor	122002-104
► C11	47 $\mu$ F, 16 V Aluminum Electrolytic Fixed Axial-Lead Capacitor	24-160476
C12	0.1 $\mu$ F, $\pm$ 10%, 25 V Ceramic-Disc Axial-Lead Capacitor	122002-104
C13	0.01 $\mu$ F, + 80%, -20%, 25 V Ceramic-Disc Axial-Lead Capacitor	122005-103
C14, C15	0.1 $\mu$ F, $\pm$ 10%, 25 V Ceramic-Disc Axial-Lead Capacitor	122002-104
C16-C23	0.01 $\mu$ F, + 80%, -20%, 25 V Ceramic-Disc Axial-Lead Capacitor	122005-103
C24, C25	0.1 $\mu$ F, $\pm$ 10%, 25 V Ceramic-Disc Axial-Lead Capacitor	122002-104
► C26	47 $\mu$ F, 16 V Aluminum Electrolytic Fixed Axial-Lead Capacitor	24-160476
C39, C40	0.01 $\mu$ F, 100 V Radial-Lead Mylar Capacitor	21-101103
► C41	47 $\mu$ F, 16 V Aluminum Electrolytic Fixed Axial-Lead Capacitor	24-160476
C42, C43	0.0047 $\mu$ F, 100 V Radial-Lead Mylar Capacitor	21-101472
C44, C45	0.001 $\mu$ F, 100 V Radial-Lead Mylar Capacitor	21-101102
C46	470 $\mu$ F, 16 V Aluminum Electrolytic Fixed Axial-Lead Capacitor	24-250477
► C47-C56	22 $\mu$ F, 35 V Aluminum Electrolytic Fixed Axial-Lead Capacitor	24-350226
C57-C88	0.1 $\mu$ F, $\pm$ 10%, 25 V Ceramic-Disc Axial-Lead Capacitor	122002-104
► C82	0.001 $\mu$ F, 100 V Radial-Lead Mylar Capacitor	21-101102

### ***Integrated Circuits***

2N	Type-12L6 Programmable-Array Logic 1	137316-001
3A	Type-Z8002 16-Bit Microprocessor	137275-001
3C	Type-74LS373 Integrated Circuit	37-74LS373
3F, 3H	Custom Integrated Circuit 10	137281-001
5A	Type-74LS74 Integrated Circuit	37-74LS74
5C	Type-12L6 Programmable-Array Logic 1	137316-001
8M	Type-74S04 Integrated Circuit	37-74S04

### ***Resistors***

R49	220 $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-221
R50	1 k $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-102
R51	220 $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-221
R52	470 $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-471
R89	100 k $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-104
R90-R92	1 k $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-102
R98	4.7 k $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-472
R99	220 $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-221

The following part numbers were changed in the Video PCB Assembly Part list.

## **Video Printed-Circuit Board Assembly Parts List**

<i>Designator</i>	<i>Description</i>	<i>Part No.</i>
<b><i>Capacitors</i></b>		
► C3-C17	22 $\mu$ F, 35 V Aluminum Electrolytic Axial-Lead Capacitor	24-350226
<b><i>Resistors</i></b>		
R62	2.2 k $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-222
► R63	1 k $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-102
► R64, R65	82 $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-820
R66	220 $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-221
R67	470 $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-471
R68	1 k $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-102
R69	2.2 k $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-222
► R70	1 k $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-102
► R71, R72	82 $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-820
R73	220 $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-221
R74	470 $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-471
R75	1 k $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-102
R76	2.2 k $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-222
R77	1 k $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-102
► R78, R79	82 $\Omega$ , $\pm 5\%$ , $\frac{1}{4}$ W Resistor	110000-820
<b><i>Transistors</i></b>		
► Q1-Q4	Type-2N3904, 60 V, 1 W, NPN Transistor	34-2N3904
► Q5-Q7	Type-2N3706, 40 V, 1 W, PNP Transistor	33-2N3906

The following part numbers were changed in the Foot-Pedal Control Assembly Parts List.

### Foot-Pedal Control Assembly Parts List

<i>Part No.</i>	<i>Description</i>
<i>Upright and Sit-Down Cabinets</i>	
▶ 19-9026	5 k $\Omega$ Potentiometer <i>Acceptable substitute is part no. 19-9022</i>
72-8606	#6-32 x .38-Inch Hex Socket-Head Cap Screw
040028-01	Compression Spring <i>(for pedal)</i>
▶ 177010-240	#10-24 Hex Locknut

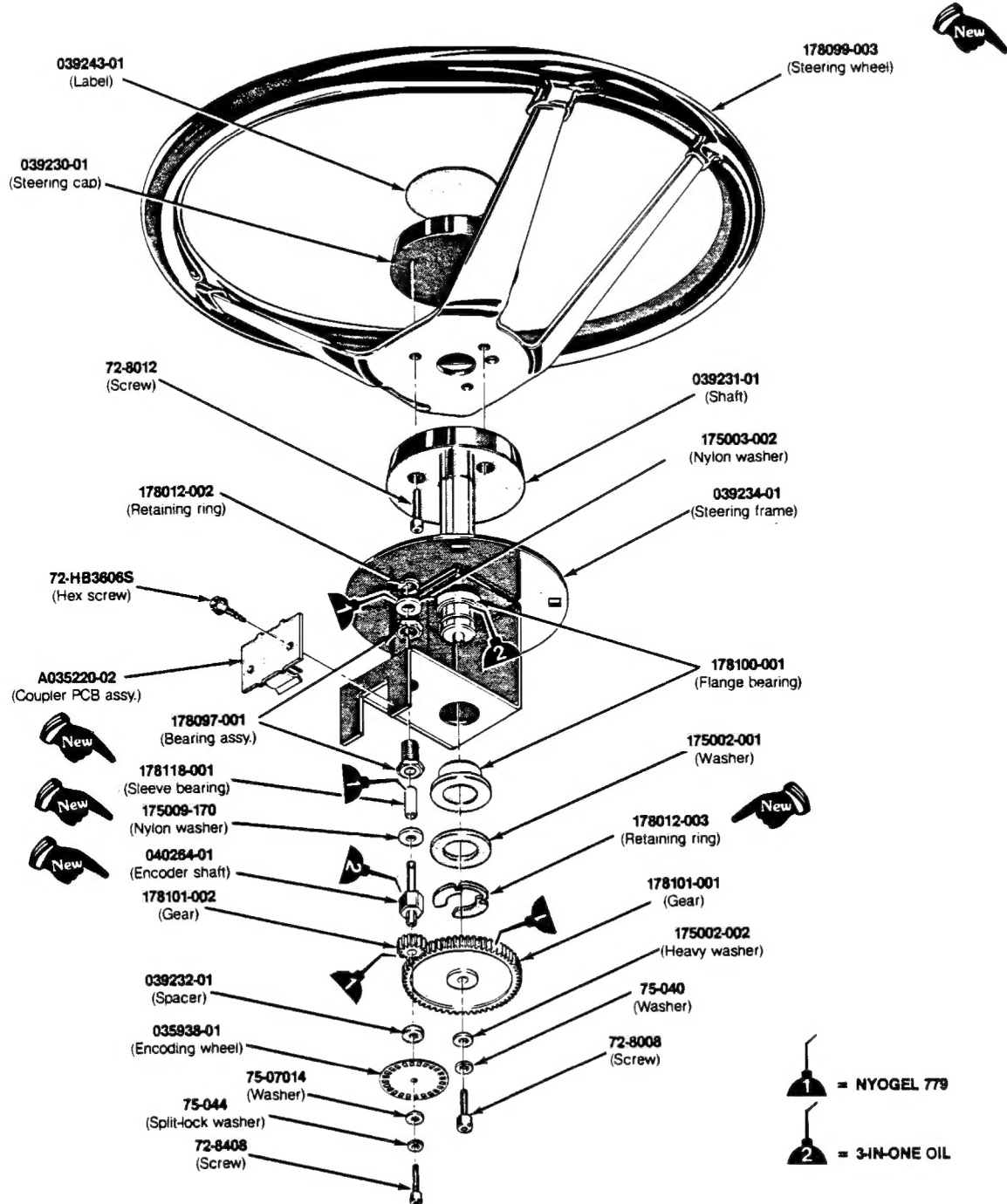
The following part number was changed in the Utility Panel Assembly Parts List.

### Utility Panel Assembly Parts List

<i>Part No.</i>	<i>Description</i>
176018-002	#6-32 x 1/2-Inch Thread-Forming Screw
75-9910W0	#1 $\frac{1}{32}$ -32 Stamped Nut
178070-001	Volume Control Knob
▶ 179125-001	Grounding Clip

## Illustration Changes

Please note the changes made to the Steering-Wheel Control Assembly illustration which are indicated by this symbol:



**Figure 3-5 Steering-Wheel Control Assembly**  
**U.S.-Built A039229-01 E**  
**Ireland-Built A039229-02 E**

**Figure 3-4:** Part no. 75-945S (Hex locknut) changed to 177010-244.

**Figure 3-9:** Part no. 75-941S (Hex locknut) changed to 177010-240.

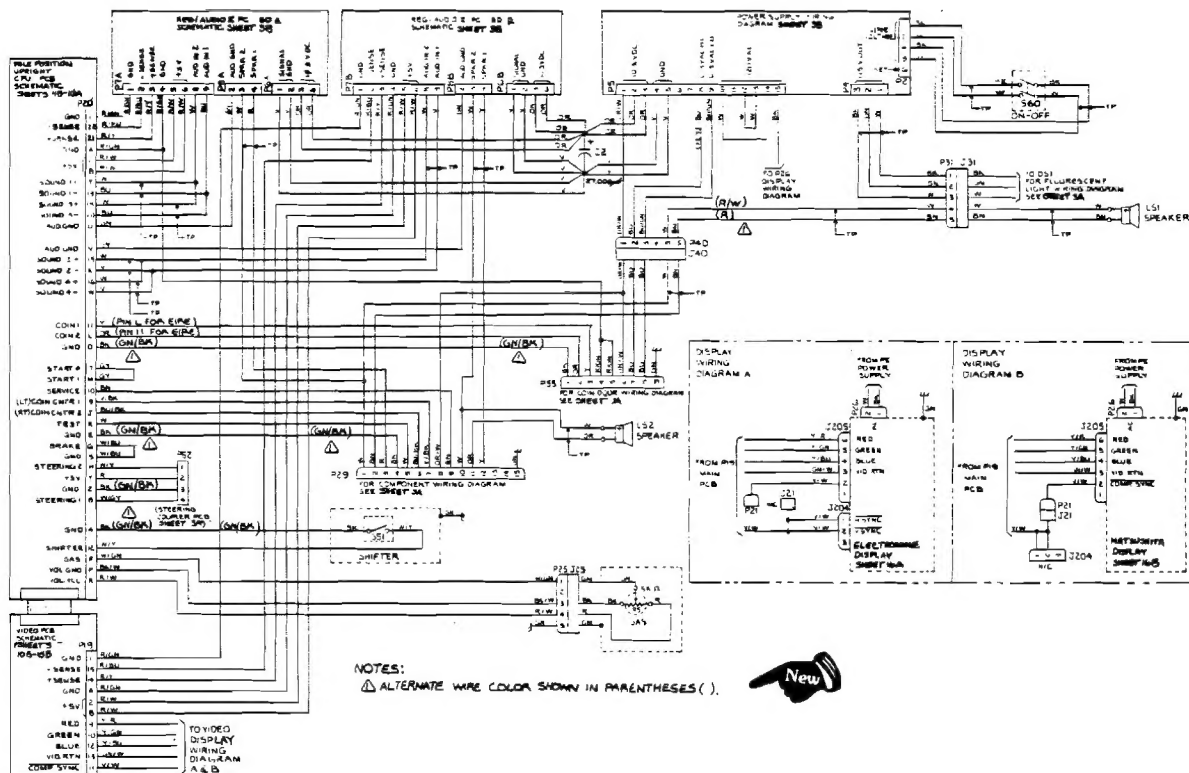
**Figure 3-15:** Part no. 75-916S (Hex nut) has been replaced by part no. 179125-001 (Grounding clip).

**Figure 3-18:** Part no. 034536-02 (Foam pad) changed to 034536-03.



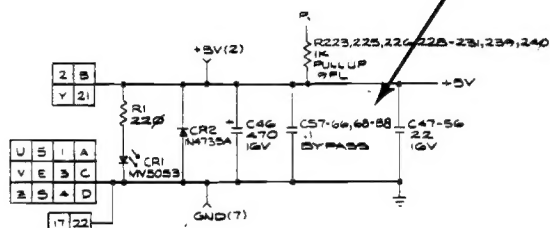
# Schematic Changes

## Sheet 1B

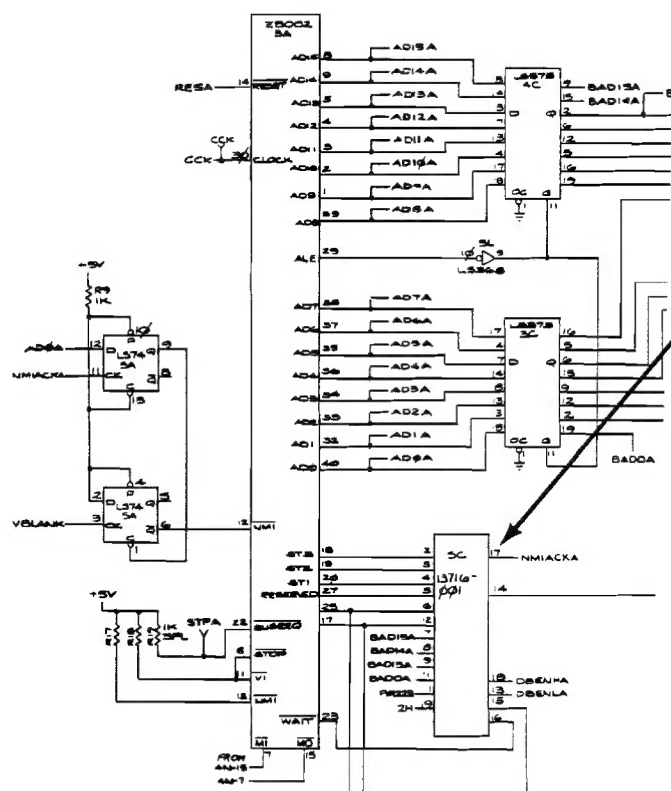


C85-C88 have been added.

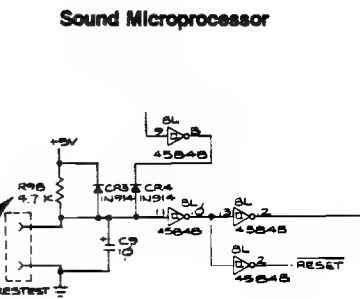
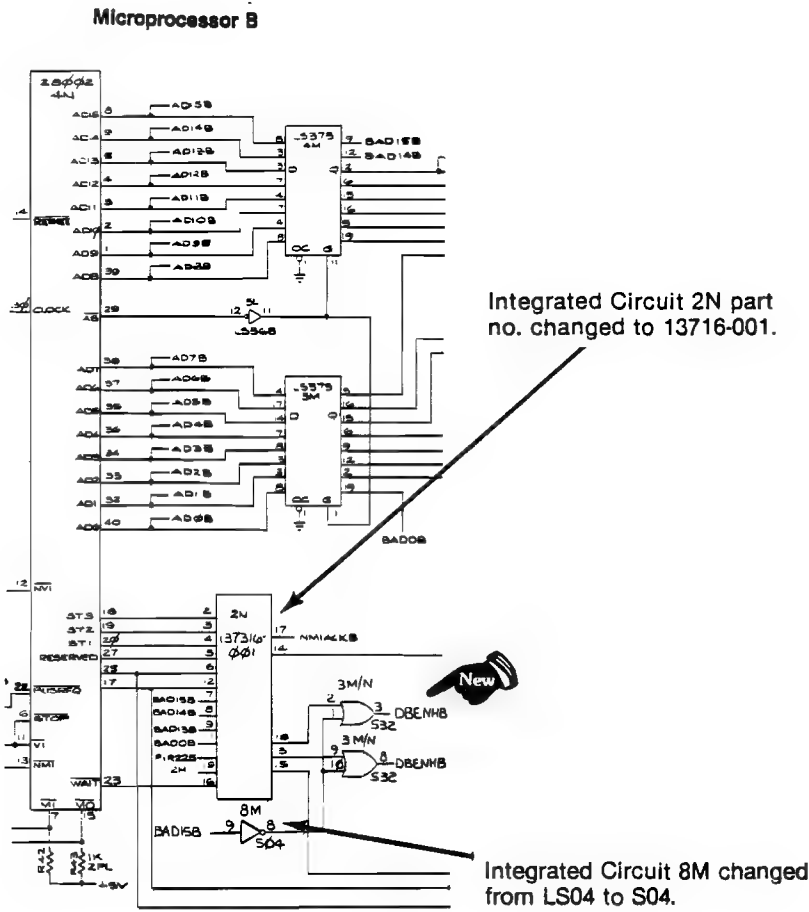
### CPU PCB Power Input

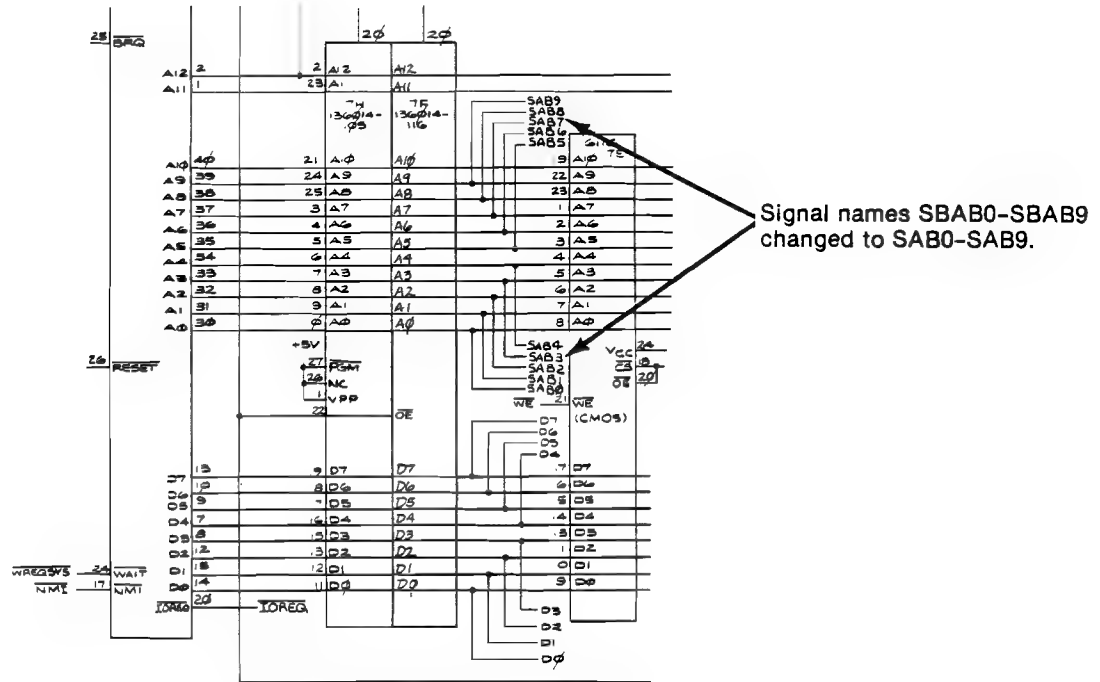


### Microprocessor A



Integrated Circuit 5C part  
no. changed to 13716-001.

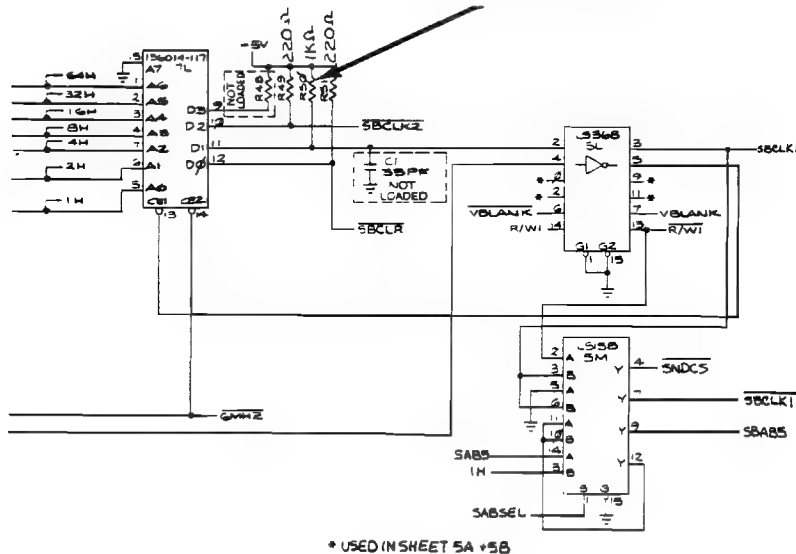




Sheet 7A

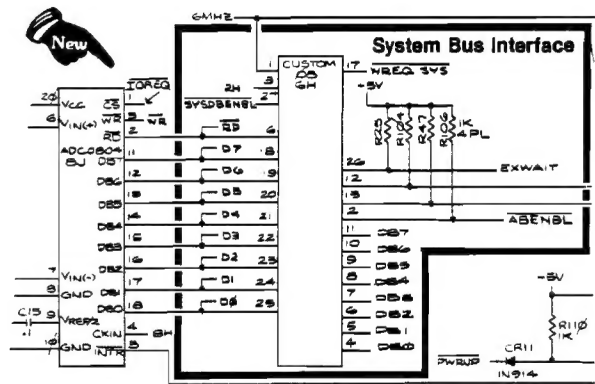
### CPU PCB Sync Chain

Value of R50 changed to 1 k $\Omega$ .

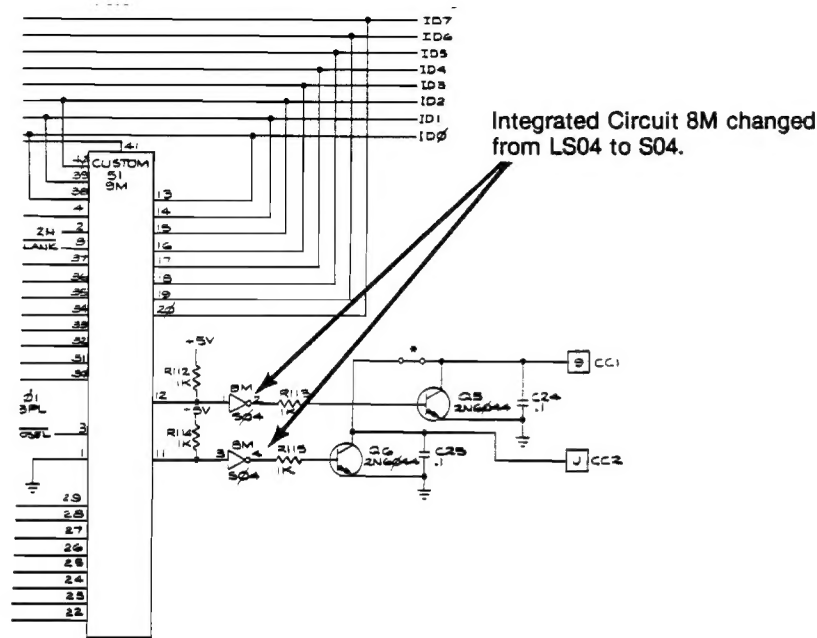


\* USED IN SHEET 5A + 5B

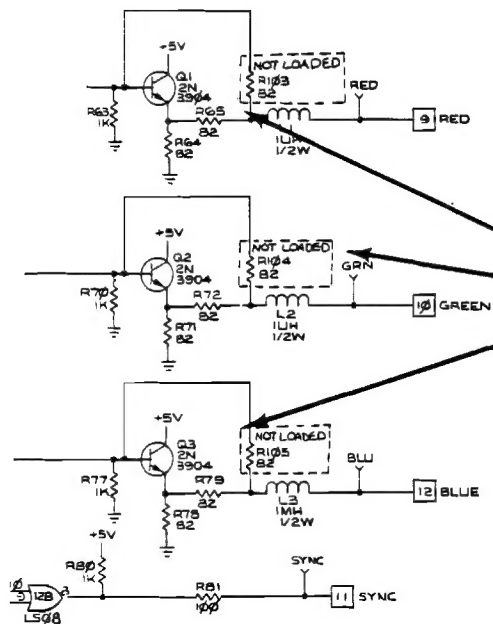
Brake and Gas Pedal Input



Option Switch Input and I/O Interface



# Color Memory and Output



Transistors Q1-Q3 have been added.  
Resistors R63, R70 & R77  
have been added.  
Resistors R103-R105 are not loaded.



